

4.5 PSP Cover Sheet (Attach to the front of each proposal)

Proposal Title: Tuolumne River Special Run Pool 10 Restoration
 Applicant Name: Turlock Irrigation District
 Mailing Address: PO Box 849 (333 East Canal Dr.) Turlock CA 95380
 Telephone: 209-883-8316
 Fax: 209-656-2143
 Email: wbfryer@tird.org

Amount of funding requested: \$2,179,000 for 3 years

Indicate the Topic for which you are applying (check only one box).

- | | |
|---|---|
| <input type="checkbox"/> Fish Passage/Fish Screens | <input type="checkbox"/> Introduced Species |
| <input checked="" type="checkbox"/> Habitat Restoration | <input type="checkbox"/> Fish Management/Hatchery |
| <input type="checkbox"/> Local Watershed Stewardship | <input type="checkbox"/> Environmental Education |
| <input type="checkbox"/> Water Quality | |

Does the proposal address a specified Focused Action? ☒ yes ☐ no

What county or counties is the project located in? Stanislaus

Indicate the geographic area of your proposal (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> Sacramento River Mainstem | <input type="checkbox"/> East Side Trib: _____ |
| <input type="checkbox"/> Sacramento Trib: _____ | <input type="checkbox"/> Suisun Marsh and Bay |
| <input type="checkbox"/> San Joaquin River Mainstem | <input type="checkbox"/> North Bay/South Bay: _____ |
| <input checked="" type="checkbox"/> San Joaquin Trib: <u>Tuolumne</u> | <input type="checkbox"/> Landscape (entire Bay-Delta watershed) |
| <input type="checkbox"/> Delta: _____ | <input type="checkbox"/> Other: _____ |

Indicate the primary species which the proposal addresses (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | |
| <input type="checkbox"/> Winter-run chinook salmon | <input type="checkbox"/> Spring-run chinook salmon |
| <input type="checkbox"/> Late-fall run chinook salmon | <input type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Delta smelt | <input type="checkbox"/> Longfin smelt |
| <input type="checkbox"/> Splittail | <input type="checkbox"/> Steelhead trout |
| <input type="checkbox"/> Green sturgeon | <input type="checkbox"/> Striped bass |
| <input type="checkbox"/> Migratory birds | <input type="checkbox"/> All chinook species |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> All anadromous salmonids |

Specify the ERP strategic objective and target (s) that the project addresses. Include page numbers from January 1999 version of ERP Volume I and II:

ERP Volume II pp 409 & 410: Restoration of stream & riparian habitat;
ecological processes; gravel recruitment, transport and cleaning processes;
a diverse self-sustaining riparian corridor; and predator reduction.

Indicate the type of applicant (check only one box):

- | | |
|---|---|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input checked="" type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

Indicate the type of project (check only one box):

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> Research | |

By signing below, the applicant declares the following:

- 1.) The truthfulness of all representations in their proposal;
- 2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- 3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Wilton B. Fryer

Printed name of applicant

Wilton B. Fryer

Signature of applicant

TUOLUMNE RIVER SPECIAL RUN POOL 10 RESTORATION

I. TITLE PAGE

Project Manager
Turlock Irrigation District
333 East Canal Drive
Turlock, CA 95380

Wilton Fryer
Water Planning Department Manager
209-883-8316
FAX 209-656-2143
e-mail: wbfryer@tid.org

APPLICANT:

The Turlock Irrigation District (TID) is a California irrigation district, a political subdivision of the State of California. TID is a tax exempt public agency.

CONTACTS:

For contract and project administration:	Wilton Fryer
For fishery and habitat details:	Tim Ford
	209-883-8275
	FAX 209-656-2143
	e-mail: tjford@ainet.com

PARTICIPANTS:

Tuolumne River Technical Advisory Committee (TRTAC) made up of the Turlock Irrigation District (TID), Modesto Irrigation District (MID), City & County of San Francisco (CCSF), California Dept. of Fish & Game (CDFG), and the US Fish & Wildlife Service (USFWS). Collaborating stakeholder groups with TRTAC are the Tuolumne River Preservation Trust, Friends of the Tuolumne, California Sports Fishing Protection Alliance, Bay Area Water Users Association, East Stanislaus Resource Conservation District, National Marine Fishery Service (NMFS), and local mining operators and landowners.

COST SHARE PARTICIPANTS:

Turlock Irrigation District, Modesto Irrigation District, and City & County of San Francisco through the TRTAC and the US Fish & Wildlife Service AFRP.

TUOLUMNE RIVER SPECIAL RUN POOL 10 RESTORATION

II. EXECUTIVE SUMMARY

SUBMITTED BY: TURLOCK IRRIGATION DISTRICT

DESCRIPTION:

The Special Run Pool (SRP) 10 Restoration Project involves restoration of instream aquatic habitat and shaded riverine aquatic habitat and reduction of predatory fish habitat for the primary benefit of San Joaquin River fall-run chinook salmon. The project will rebuild a select portion of the Tuolumne River channel, at river mile 25.4, (approximately 15 miles east of Modesto) where past instream gravel mining created a large deep lake area in the main channel. That changed the habitat to one that favors warm water predator species like largemouth bass. This project will return this portion of the river to a more natural, dynamic morphology that will improve, restore and protect instream and riparian habitat for fall run chinook salmon survival, including restoring hydrological and geomorphic processes. The channel will be reformed into an 500 foot wide riparian flood plain re-creating a riffle and run pattern that follows the restored meander channel of the river along with native vegetation planted on fill terraces in a mix similar to that found on undisturbed segments of the river. This is the second of two adjacent SRP restoration projects, SRP's 9 & 10, in this reach of the river.

BIOLOGICAL OBJECTIVES:

1. Reduce salmonid fish predator habitat.
2. Restore and increase habitat for natural salmon production.
3. Reconstruct natural channel geometry scaled to current channel forming flows.
4. Restore native riparian plant communities within their predicted hydrological regime.

TASKS & SCHEDULES:

The CEQA/NEPA mitigated EA/IS, permitting, for both SRP 9 & 10 is being funded under current AFRP contracts and contributions from TID, MID, and CCSF. Construction funded by AFRP and CALFED, in the upstream SRP 9, will start in June 1999 and will be completed in March 2000, including revegetation. Construction of SRP 10 requires two years and would start in June 2001 and will be completed in March 2002, including revegetation.

JUSTIFICATION:

The fall-run chinook salmon in the tributaries of the San Joaquin River are currently listed as a species of concern by the USFWS. Anadromous salmonid populations in the lower Tuolumne River require adequate ecosystem health to achieve and sustain their potential productivity. Restoring and maintaining dynamic geomorphic processes are crucial for insuring healthy river ecosystems with natural productive salmonid populations. When complete restoration of a river ecosystem is infeasible, as for alluvial rivers regulated by dams, limiting factors, like predator habitat and poor quality riverine habitat, must be identified for prioritizing actions that would best improve the ecosystem, particularly salmonid habitat. Predation on juvenile salmon has been identified, through field studies in the Tuolumne River, as having a significant impact on survival of salmon in the Tuolumne River. Currently nearly all naturally

produced salmon juveniles and smolts must pass through SRP 10 on their out migration.

BUDGET:

The total project budget is estimated to be \$4,593,000. The CALFED is being asked to fund \$2,179,000 or 47% of SRP 10 project costs. This is \$1,785,000 for construction, \$54,000 for project management, \$161,000 for construction management, and a \$179,000 construction contingency. The USFWS AFRP is being asked to fund the balance of the construction, \$2,384,000, including \$174,000 for project monitoring and \$234,000 for revegetation.

APPLICANT QUALIFICATIONS:

Since 1971, TID, MID, and CCSF have, in cooperation with DFG and USFWS, monitored river conditions and developed programs that enhance natural production of fall-run salmon. Tim Ford has been the staff biologist for the TID and MID since 1981. The firms EA Engineering and Stillwater Sciences, have been conducting numerous studies for the Districts on the current salmon habitat since 1987. The firm McBain & Trush, geomorphology consultants, have experience in developing restoration plans for river systems in California. The firm HDR Engineering will provide construction design and management.

MONITORING PLAN:

A project specific monitoring plan was developed as part of the mitigation measures in the EA/IS prepared for this project. The monitoring plan is designed to compliment the overall river-wide monitoring program in the EIS for the FERC Settlement Agreement and Order for the Don Pedro Project. The basic components of the SRP monitoring plan are:

1. Physical habitat changes: Pre and post construction changes will be recorded to assure that the desired channel contours and cross sections were built as designed and to assess geomorphological changes after major flood events.
2. Riparian habitat changes: Revegetation will require annual inspections during the first few years to confirm survival of planted materials and perform replanting if deemed necessary, followed with periodic assessment of natural changes in the vegetation mix.
3. Fish population changes: This will involve evaluation of pre and post project changes in habitat conditions for both fish predators and salmon. Monitoring criteria would include items such as flow velocity, temperature, transit time through the stream channel, and sampling or observations of fish populations and riffle spawning conditions.

LOCAL SUPPORT; COORDINATION WITH OTHER PROGRAMS:

This is the second SRP project approved by the TRTAC participants. Coordination meetings have already been held with the affected landowners in the project area and with federal, state and county agencies. Recognizing that their individual concerns need to be addressed, the landowners have been cooperative and supportive of the project. USFWS has been supportive of the project and is continuing to work with TID to obtain AFRP funding for the overall project.

TUOLUMNE RIVER SPECIAL RUN POOL 10 RESTORATION

III. PROJECT DESCRIPTION

A. LOCATION

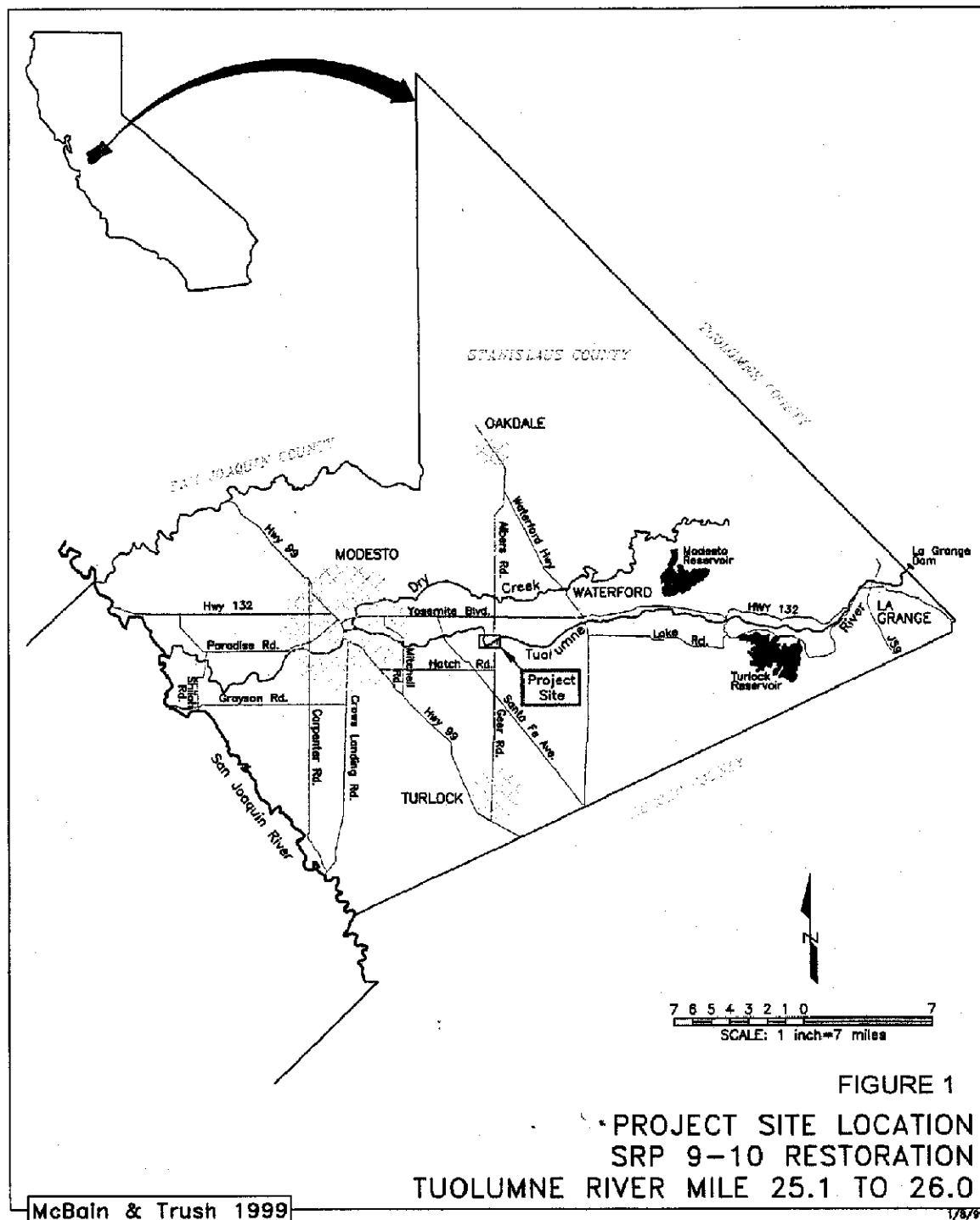
The Special Run Pool 10 Restoration Project will rebuild a 2,100 foot long portion of the Tuolumne River channel, starting at river mile 25.4, downstream of the Geer Road bridge crossing the Tuolumne River, approximately 15 miles east of Modesto in Stanislaus County shown in Figure 1. The project location on the Tuolumne River is shown in Figure 2.

B. PROJECT DESCRIPTION AND APPROACH

The Tuolumne River Technical Advisory Committee (TRTAC), under the auspices of the 1995 Don Pedro Project Settlement Agreement (FERC License No. 2299), have developed the final draft of a plan to restore instream aquatic habitat and shaded riverine aquatic habitat for the primary benefit of San Joaquin fall-run chinook salmon in the Tuolumne River below La Grange dam. The TRTAC specifically identified both SRP 9 & SRP 10 as prime "predator isolation" projects for the Tuolumne River. On behalf of the TRTAC, the firm of McBain & Trush has developed the project concept design for the proposed habitat restoration work based on geomorphology and fluvial process in a reforested riparian floodplain.

These two adjacent restoration segments including their associated revegetation are to be reconstructed over a three to four year period, with SRP 9 to be reconstructed first starting in 1999 followed by SRP 10 starting in 2001. These two SRPs are stand alone projects, however the CEQA/ NEPA mitigated EA/IS and permitting are being done together to facilitate future CALFED and AFRP funding for the SRP 10 civil design, revegetation design, and restoration construction. SRP 9 is planned for two years of construction to meet the diesel emissions constraints of the local air resources district. The Air Resources District mitigation proposed in the EA/IS indicated that construction of SRP 9 should be over a period of two years because of the magnitude of construction planned for the first year in the Mining Reach restoration projects. SRP10 is also anticipated to take two years to construct given the large volume of imported fill material involved. The landowners adjacent to the SRP projects have asked the TID to seek a variance that would allow SRP 9 to be constructed in the original 1 year period to minimize impacts to their land and farming operations.

The SRP restoration work consists of filling in deep (10 to 34 feet below normal channel grade in SRP 10) lake like pool areas created by past instream gravel mining and re-creating a riffle and run pattern that follows the restored meander channel of the river. The channel will be reformed into a 500 foot wide riparian floodplain complete with native vegetation planted on fill terraces in a mix similar to that found along undisturbed segments of the river. The aerial extent of the project area including the restoration work proposed is shown in EA/IS Figure 5. A typical cross-section through the restored area is shown in Figure 3. The reconstructed floodway channel cross-section will be hydraulically sized to be an active riverine channel at currently regulated flows. These flows periodically could reach as high as 15,000 cfs for short periods.



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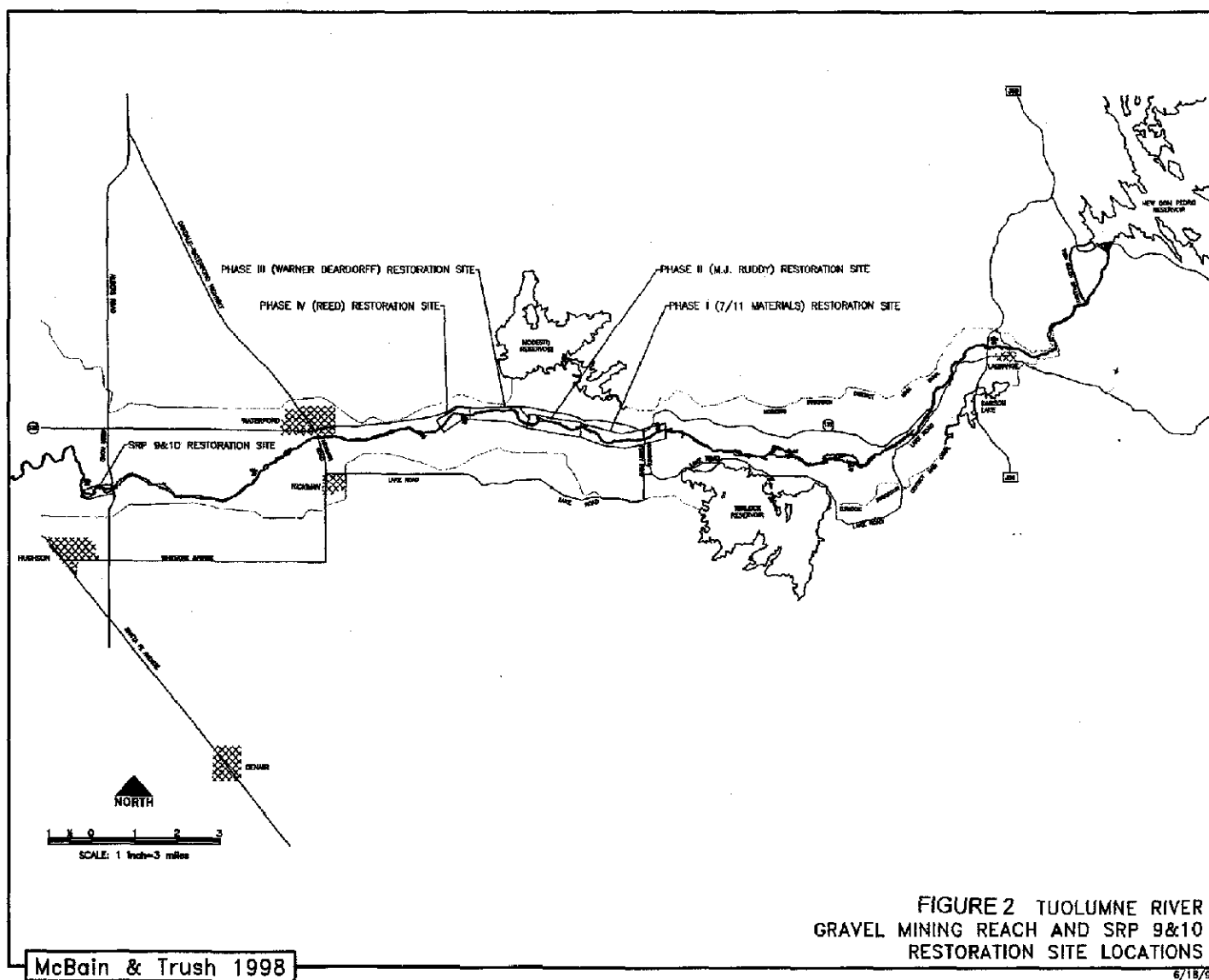
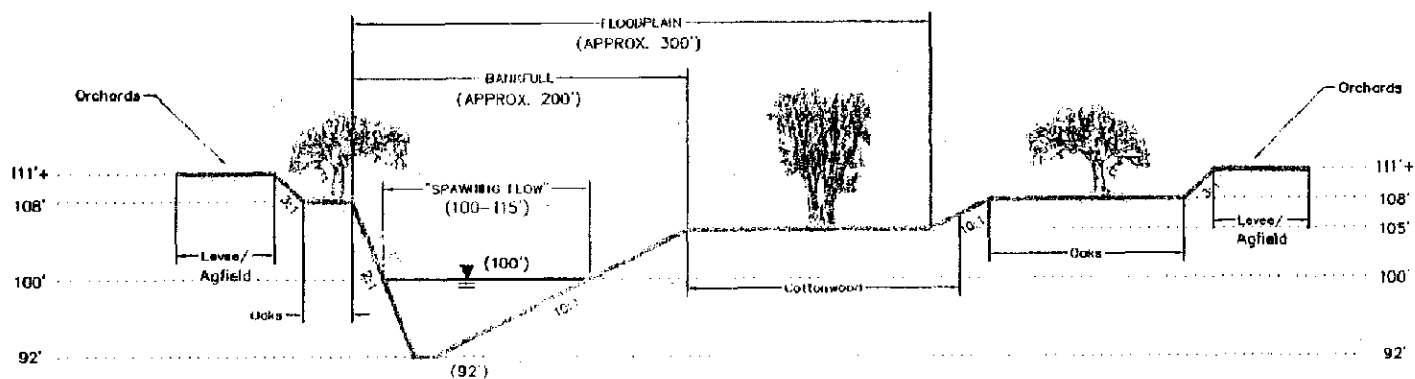


FIGURE 2 TUOLUMNE RIVER
GRAVEL MINING REACH AND SRP 9&10
RESTORATION SITE LOCATIONS

6/18/98

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NOTES:

SIDE SLOPE: Horizontal: Vertical
ELEVATION: Arbitrary Datum
5X Vertical Exaggeration

Figure 3 Conceptual Design Cross-Section through apex of point bar.

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SCIENCE, AND
TECHNOLOGY

PROJECT NO:	13009.01.2000	DATE:	7/25/95
FILE NAME:	EA-PTBAR.DWG	REVIEWED BY:	F. Ligon

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The rebuilt channel is sized assuming a river stage elevation that results from full grown riparian forest vegetation at design flows. It is anticipated and planned that during such high flow events there will be some movement of the channel within the flood plain to expose added spawning materials and clean existing spawning gravels. To minimize long term future maintenance expenditures, this restoration work is being designed with the intent to provide a self maintaining riparian floodway channel once the revegetation is completed and established.

B. GENERAL CONDITIONS OF PROPOSED WORK

The SRP 9 & SRP 10 projects were originally developed as one project because of their proximity to each other along the river. From a practical construction and funding point of view, they are two projects, each with a very similar scope of work. Lessons learned in first constructing the smaller SRP 9, will be incorporated in adjusting the final design of SRP 10. Both projects will use the same access route to the local road system.

The heavy reconstruction work in the river is anticipated to be limited for fishery reasons to an annual opportunity window of about 90 workdays from mid-June to mid-October when salmon are not as abundant in the river. It may be possible to stockpile fill materials at the site before the 90 day period to reduce the truck traffic during the construction period. Construction above the water level can proceed after 15 October, but should be completed before December to avoid the potential of early flood releases damaging incomplete work and to allow for revegetation planting. The restoration plantings are also seasonally restricted to the winter months when planting materials are dormant.

The CEQA and NEPA, through a mitigated EA/IS, started in June 1998 and will be completed by June 1999 for SRP 9. Construction design, revegetation design, permitting and acquisition of conservation easements are scheduled for SRP 10 in 2000 using AFRP funding, with construction in 2001 and 2002. The funding requests may be divided along the different design, construction, and revegetation elements of the project for ease of managing and tracking the differing funding sources.

The materials for this project will need to be imported into the site. The anticipated sources of materials are deposits of dredger tailings along the upper Tuolumne River. One benefit of using the tailings from the Tuolumne is that it may be possible to restore additional floodplain habitat during the mining of the excavation areas. We intend to utilize some of the clean rock materials from January 1997 flood debris excavated from La Grange reservoir. This will reduce economic impacts on local aggregate supplies because these materials are of little economic value as aggregate. Alternatively, the material could come from active off channel and off site gravel mining areas between Geer Road and La Grange. The project EA/IS identified and addressed mitigation for utilization and transportation of the various sources of restoration materials available for this project. Additionally there are tailing deposits near Snelling along the Merced River that might be available. The materials cost estimates were originally based on the La Grange reservoir source and include excavation, hauling, and haul road construction costs from 1997. These cost estimates now compare favorably with purchasing materials from locally permitted sources that represent shorter haul distances because current highway and construction demands have significantly increased the cost of the local aggregate materials.

Recreation of the riparian floodway habitat zone raises an issue of long term maintenance of project improvements. TID and MID will jointly hold conservation easements from willing sellers that protects the public investment, but at the same time protects the landowner property rights.

IV. ECOLOGICAL & BIOLOGICAL BENEFITS

A. EXPECTED PROJECT BENEFITS

1. Reduce salmonid fish predator habitat.
2. Restore and increase habitat for natural salmon production.
3. Reconstruct natural channel geometry scaled to current channel forming flows.
4. Restore native riparian plant communities within their predicted hydrological regime.

The SRP reach projects address the ERPP objectives and visions for the Tuolumne River Ecological Unit identified on pages 409 & 410 of the ERPP Vol. II. These include restoration of stream & riparian habitat; ecological processes; gravel recruitment, transport, and cleaning processes; a diverse self-sustaining riparian corridor; and predator reduction.

B. BACKGROUND & TECHNICAL JUSTIFICATION

The Tuolumne River is a major tributary of the San Joaquin River. The Don Pedro Project is the largest reservoir located above the fall-run chinook salmon spawning reach on the Tuolumne. Don Pedro Reservoir is owned by the Turlock Irrigation District (TID) and the Modesto Irrigation District (MID) and is licensed by the Federal Energy Regulatory Commission (FERC).

The fall run chinook salmon in the tributaries of the San Joaquin River are currently listed as a species of concern by the USFWS. Anadromous salmonid populations in the lower Tuolumne River require adequate ecosystem health to achieve and sustain their potential productivity. Restoring and maintaining dynamic geomorphic processes are crucial for insuring healthy river ecosystems with natural productive salmonid populations. When complete restoration of a river ecosystem is infeasible, as for alluvial rivers regulated by dams, limiting factors, like predator habitat and poor quality riverine habitat, must be identified for prioritizing actions that would best improve the ecosystem, particularly salmonid habitat. Predation on juvenile salmon and smolts has been identified, through field studies, as having a significant impact on survival of salmon in the Tuolumne River. Currently nearly all naturally produced juvenile salmon must pass through SRP 9 and SRP 10. Reducing predator habitat by reconstructing a riparian floodplain meets these desired priority actions.

The TRTAC specifically identified habitat conditions to be improved to enhance natural salmon production in the Tuolumne River. The TRTAC has developed the final draft of an integrated, long-term fish and riparian habitat restoration plan and monitoring program for the Tuolumne River below La Grange Dam that utilizes adaptive management for enhancing the natural production of salmon. The TRTAC and the AFRP have each funded \$117,500 towards this integrated restoration plan. Initial public meetings were held with staff from the City of Modesto and Stanislaus County public works and planning agencies in December 1998. Adoption of a final plan is scheduled for June 1999. The plan divides the river into four basic reaches with 14 segments representing specific types of restoration projects within each reach. There are projects that focus on restoration of geomorphic processes, others on riparian

restoration and predator reduction, and still others deal with gravel re-introduction, cleaning, and sediment management.

The Tuolumne River supports a population of fall-run chinook salmon, whose numbers have fluctuated from 40,000 fish in 1985, to a low of 100 fish in 1991, and is on another upward swing with 7,000 spawners in 1997 and 8,900 in 1998. The underlying premise of this project is that by creating the proposed sustainable riverine habitat both the native fishery and riparian species will benefit and stressors will be reduced. The impacts of predators on smolt survival are based on feeding studies, conducted by EA Engineering for the Districts. The prime target of this project is to improve the survival of juvenile salmon and smolts by reducing the habitat of introduced predator species, primarily largemouth bass. The riparian reforestation is intended to provide food and shade for the juvenile salmon. There is the added benefit to terrestrial species in providing a more continuous corridor of riparian habitat in the restored areas. The restored channel sinuosity is intended to provide a sustainable and dynamic river morphology, i.e., infrequent flood-related channel-bed movement with periodic scour, that partially or fully restores the processes associated with natural salmon production and survival.

This proposed restoration project provides long term low maintenance predator control combined with habitat restoration. This can be contrasted with an annual system of non-selective predator control, such as electroshocking, tournament fishing, poisoning, etc., that has a lower up front cost. However, this alternative solution requires continued annual expenses, is of limited effectiveness in targeting the primary predators, has unfavorable social consequences, and does not meet the intent of the CALFED solutions by providing an improved self sustaining riverine habitat for salmon. Such alternatives will not be considered further.

V TECHNICAL FEASIBILITY & TIMING

A. IMPLEMENTABILITY

This is the fifth of several restoration projects being proposed for the Tuolumne River based on the Habitat Restoration Plan developed by the TRTAC. The staff will continue to work closely with the affected landowners in the development of site specific adjustments to the preliminary plans. The firm EDAW, Inc. was hired to assist with the CEQA, NEPA, and permitting work. The NEPA portion was jointly developed by the USFWS and coordinated with the ATRP program. A mitigated EA/IS was jointly developed between the TID, as project manager & lead agency, and the USFWS as a Federal funding agency. The EA/IS tiers off the 1995 EIS for the FERC Settlement Agreement for the Don Pedro Project. Public and agency comments were heard in July and August 1998 and the comments focused on economic issues of compensation for conservation easements and lost availability of aggregate supplies. No environmental comments were received. An addendum to the proposed mitigation measures addressing the comments received is being finalized with adoption anticipated in June 1999. The mitigation is designed to avoid a take of listed species such that take permits under ESA \ CESA will not be required.

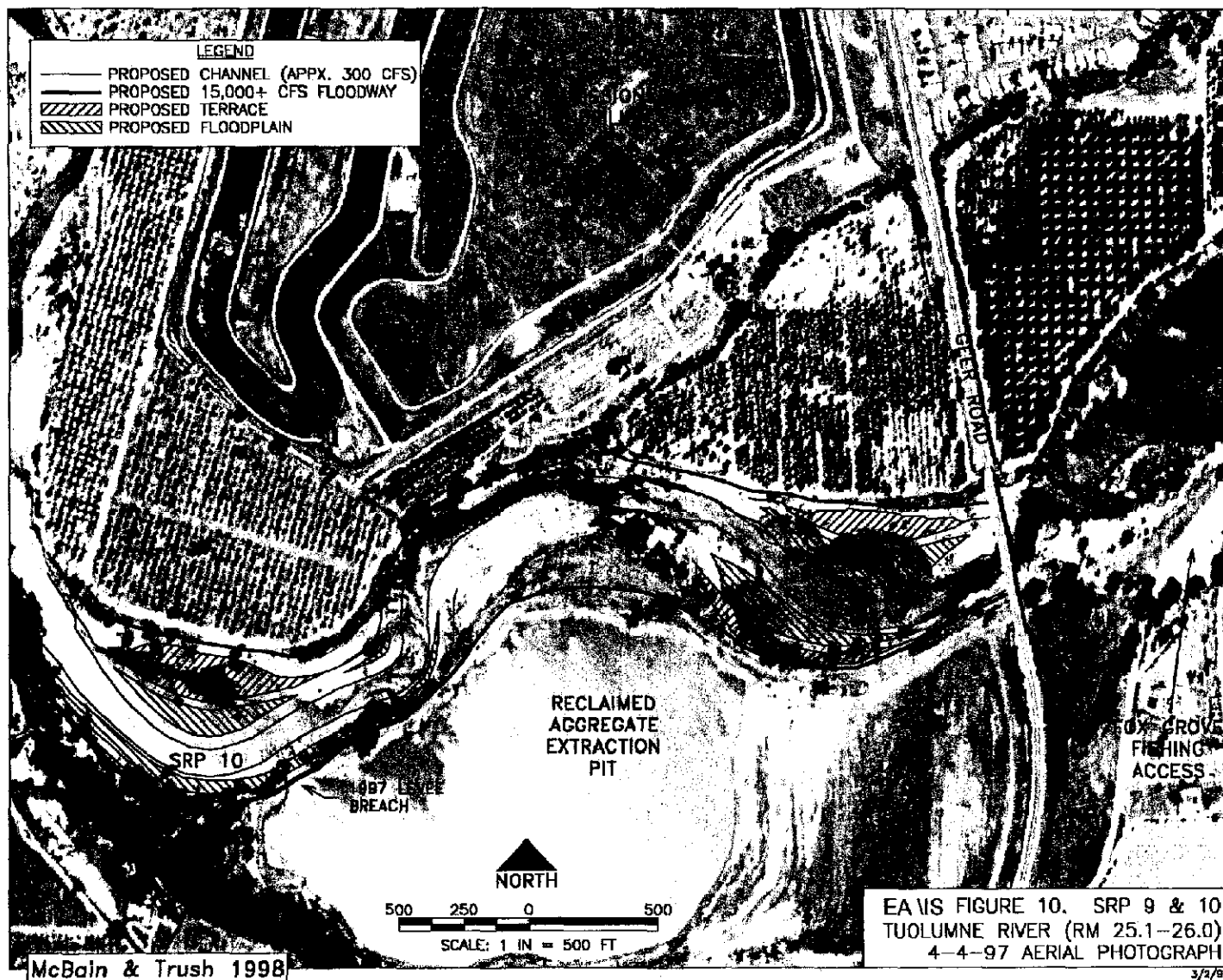
The flood of 1997 created a breach in the dike that separates SRP 10 from the abandoned off channel mining pit exposing an additional source of bass predation. CALFED has funded repair of this dike breach along with an additional year of pre-project monitoring in 1999 because it was anticipated that a request for project funding would be re-submitted for the full channel restoration of SRP 10 starting in 2001.

The following is a list of the anticipated permits and agencies being acquired with the assistance of the firm EDAW.

- 1) A 404 Fill & Dredge Permit from the USCOE, including a wetlands delineation.
- 2) A1600 Series Streambed Alteration Agreement from CDFG.
- 3) A lease and Boundary Delineation finding from the State Lands Commission.
- 4) A RWQCB 401 waiver for water quality.
- 5) An Encroachment Permit from the Reclamation Board.

The map, Figure 5 from the EA/IS, shows how the typical design and restoration treatments are integrated for both SRP 9 and SRP 10 between river mile 25.1 and 26.0.

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VI. MONITORING & DATA COLLECTION

A. MONITORING PLAN

A detailed mitigation and monitoring plan was developed with the project EA/IS. The basic monitoring program over the life of the restoration project, including costs, is summarized in Table 1. The monitoring and data collection that will be used to track the above activities is outlined in Table 2. The monitoring plan can be grouped into three basic areas.

1. **Physical habitat changes:**
Pre and post construction changes will be recorded from the as-built engineering drawings. This assures that the desired channel contours and cross sections were built as designed and these as-built records can be used to assess future geomorphological changes after major flood events.
2. **Riparian habitat changes:**
Revegetation will require annual inspections during the first few years to confirm survival of planted materials, perform replanting if deemed necessary, and to assess natural changes in the vegetation mix. Monitoring vegetation would then be reduced to evaluations after significant flood events. The layout of planting modules is designed to facilitate monitoring. There are 20 different hexagonal planting units classed by predominant vegetation type. These planting units are grouped together to recreate the diverse mosaic patches and strings of vegetation found on undisturbed areas of the Tuolumne. The center point for any "hex" that can be relocated at a later date from the as-built drawings.
3. **Fish population changes:**
This will involve evaluation of pre and post project changes in habitat conditions for both fish predators and salmon. Monitoring criteria would include items such as flow velocity, temperature, comparisons of estimated transit time through the old vs. new stream channel, combined with sampling and observations of fish populations and spawning riffle conditions.

Pre project monitoring started in 1998. Post project monitoring will start after the completion of the 7A11 Segment and increase as more segments are restored. Generally the project funded monitoring for a given segment will extend for 2 years after the completion of construction and revegetation. The project specific monitoring was designed to compliment the fishery monitoring requirements of the FERC Settlement Agreement. Annual monitoring summaries will be provided to the TRTAC. The first level of peer review for monitoring comes from the biologists that make up the regular representation on the TRTAC. There is a monitoring subcommittee of the TRTAC charged with close technical review of the FSA and project specific monitoring. Recently the UC Davis Centers for Water and Wildland Resources was asked to evaluate competing fry and smolt survival methods currently used on the Tuolumne River. Stillwater Sciences provides technical design of monitoring programs and statistical analysis of the results.

Table 1. SRP Monitoring schedule based on a sequence of hypothesized flows, to illustrate monitoring elements.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<i>Hypothetical annual peak discharge in cfs</i>		3650	7280	2980	1200	10400	8010	6870		
CONSTRUCTION	SRP 9		SRP 10							
MONITORING ELEMENTS										
SRP 9										
GEOMORPHOLOGY	Pb	ab,rx	rx, n, xs, thal			rx*, xs, thal	xs	xs, thal		
FISHERIES	ef, sv, map	ef, sv, map, sss	ef, sv, sss	ef, sv, sss	Sss	sss	sss	sss#		
RIPARIAN		ab, pp, \$	\$	pp	pp		pp			
SRP 10										
GEOMORPHOLOGY	Pb		ab, rx, xs, thal			rx*, xs, thal	xs	xs, thal		
FISHERIES	ef, sv, map	ef, sv	ef, sv, sss	ef, sv, map, sss	Sss	sss	sss	sss#		
RIPARIAN				ab, pp, \$	\$	pp	pp		pp	
MONITORING BUDGET										
Geomorphic Processes	1,600	3,500	20,900	0	0	19,500	15,600	3,900	0	0
Fisheries Resources	75,700	56,400	58,500	51,100	4,200	2,100	0	0	0	0
Riparian Resources	0	8,200	0	16,300	8,200	8,200	16,300	0	8,200	0
Annual Report	3,900	4,600	6,400	5,200	3,100	7,700	6,000	4,100	900	400
TOTAL	81,200	72,700	85,800	72,600	15,500	37,500	37,900	8,000	9,100	400

Geomorphology symbols: pb=pre-built channel topography; ab=as-built channel topography; n=manning's "n" hydraulic calculation; rx= bed mobility with tracer rocks; thal= channel vertical adjustment with thalweg profile;

xs= channel planform adjustment with cross-section profiles; *=bed mobility observed;

Fisheries symbols: ef=bass abundance by electrofishing; sv=smolt survival estimate; map=habitat mapping; sss=annual spawning and seining surveys; # denotes that spawning surveys will occur annually by CDFG

Riparian symbols: pb=pre-built vegetation; ab=as-built vegetation; pp=project performance plots; bio=bioengineered bank protection; \$=last year of irrigation

Table 2 Turlock Irrigation District AFRP – CALFED Project Monitoring Plan Summary

Project: Tuolumne River -- Special Run Pool (SRP) 10

1 Apr 99

Summary of Ecological & biological objectives, hypotheses, and monitoring parameters and approaches:

1) Objective: Reduce salmon fish predator habitat			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Reduce predation from non-native species with elimination of habitat created by in-channel mining pits.	Pre vs. post project construction changes.	Measure channel cross sections after construction. Using as-built drawings and topographic and photogrametry data.	Largemouth & smallmouth bass are the primary target species.
	Conversion of habitat	Compare temperature, flow velocity, transit time estimates, etc., under pre & post construction conditions.	
	Predator population density	Pre and Post construction surveys of fish populations.	Snorkel and electro-fishing
	Salmon Smolt survival	Multiple mark recapture of smolts using RST below site.	In conjunction with river wide monitoring program

2) Objective: Restore and increase habitat for natural salmon production			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Restore alternate bar (pool riffle) morphology.	Pre vs. post construction and topographic changes.	Measure channel cross sections after construction from as-built drawings.	As-Built drawing becomes starting point for fluvial process monitoring.
B. Restore spawning habitat.	Area of riffles created from channel re-construction	Evaluate use during spawning period, redd counts, etc.	

3) Objective: Reconstruct a natural channel geometry scaled to current channel forming flows			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Geomorphological & fluvial process occur at channel forming flows (5,000 cfs)	Channel thalweg movement	Measure cross sections after flow events of predetermined magnitude.	Frequency of occurrence subject to random timing of flow events. Target three samples.

4) Objective: Restore native riparian plant communities within their predicted hydrological regime			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Composition and distribution of native riparian vegetation can be re-established.	Survival: 90 % 1 st year, 70 % 2 nd year, & 60 % 3 rd year with 10 % increase in cover in same period.	Set up permanent plots to track survival. Evaluate vigor, size, species dominance, canopy coverage, etc.	Plants will be irrigated for year 1 & 2
B. Establish different plant series on appropriate reconstructed geomorphic surfaces.	Pre & Post construction vegetation mapping.	20 separate landscape types, based on a 50 ft wide hexagon planting unit, will be used to re-create plant community diversity within flood plain.	Protection from beavers will be necessary.

VII. LOCAL INVOLVEMENT

A. THIRD PARTY IMPACTS

The parties most directly impacted by the proposed project are the local landowners. The TID staff and consultants started working with local stakeholders in 1997 and will continue to meet with the affected stakeholders to listen to and address their individual concerns. Recognizing those individual concerns, the landowners have been cooperative and supportive of the project. While the mining operators are not landowners in the project area, they are included in the stakeholder meetings because the importation of the aggregate for the two SRP projects will impact their operations. Periodic meetings are held with the executive committee of the 35 landowners that will be involved with all six restoration projects the TRTAC has identified, even those not yet funded. Typical discussions at these meetings include restoration project activities, terms and conditions in conservation easements, ROW appraisal processes, USFWS hazardous material surveys, project design issues, etc. The Districts have initiated sending a restoration news letter to the land owners in addition to the meeting minutes sent from the land owner committee.

The formal process to acquire necessary conservation easements for the first phase of construction in the Mining Reach started in February 1999 and will be followed in April for SRP 9. The SRP 9 and SRP 10 projects involve the same two landowners. The landowners and mining operators have asked that design and ROW engineering be completed prior to entering into formal agreements such as Rights of Entry for Construction and Conservation Easements. For the SRP 10 project this work will not be completed until fall 2000.

Outreach meetings have been held with City of Modesto and Stanislaus County public works and planning agency staffs starting in December 1998. The Stanislaus County planning department is actively involved with the Project induced modifications to the use permits for the mining operations in the project areas. Further meetings are scheduled for May and June 1999. The EA/IS for the four projects in the Mining Reach went through a public hearing in June 1998. The comments received are being addressed in the amended mitigation plan for the EA/IS. The final EA/IS is due for adoption in June 1999 and it outlines the mitigation and monitoring that are to be followed to minimize impacts associated with the restoration activities.

Attached is the notice for the EA/IS that was sent in June 1997 to the landowners, mining interests and agencies shown on the associated mailing lists. Copies of the notice letters for this phase of the project that were sent to the Stanislaus County Board of Supervisors and Planning Department are attached.

TUOLUMNE RIVER TECHNICAL ADVISORY COMMITTEE
DON PEDRO PROJECT - FERC LICENSE 2299

MODESTO IRRIGATION DISTRICT
TURLOCK IRRIGATION DISTRICT
CITY & COUNTY OF SAN FRANCISCO
CALIFORNIA DEPARTMENT OF FISH & GAME
U. S. FISH & WILDLIFE SERVICE



333 East Canal Drive
Turlock, CA 95381-0949
Phone: (209) 883-8275
Fax: (209) 656-2143
Email: tjford@tid.org

Wilton Fryer
Restoration Program Manager
Turlock Irrigation District
333 East Canal Drive
Turlock, CA 95381-0949

April 7, 1999

Dear Mr. Fryer:

The Tuolumne River Technical Advisory Committee (TRTAC) is a product of the 1995 Don Pedro Project FERC Settlement Agreement (FSA). The FSA is a precedent-setting document signed by 11 parties representing water agencies, fishery agencies, and environmental groups. The TRTAC is presently engaged in preparing a Habitat Restoration Plan for the 52-mile reach known as the Lower Tuolumne River, from La Grange Dam to the San Joaquin River. The FSA, the habitat plan, and salmon restoration plans developed by both the CDFG and US Fish and Wildlife Service, all recognize the importance of and the need for improvements from existing conditions.

The TRTAC supports the proposal for the SRP 10 project submitted by you on behalf of the TRTAC. This project will continue the restoration effort to improve salmon and riparian habitat conditions in this reach of the Tuolumne River. The TRTAC believes this project represents an important restoration action consistent with the draft Habitat Restoration Plan and will complement other restoration projects that are underway in the Tuolumne River corridor.

Authorized by and signed on behalf of the TRTAC,

Tim Ford

Tim Ford
Coordinator, TRTAC
Turlock and Modesto Irrigation Districts

George Neillands
California Department of Fish and Game

Susan Boring
U. S. Fish and Wildlife Service

Ron Yoshiyama
City and County of San Francisco

Tim Ramirez
Tuolumne River Preservation Trust

John Farnkopf
Bay Area Water Users Association

Dave Boucher
Friends of the Tuolumne

CC: TRTAC distribution

TURLOCK IRRIGATION DISTRICT

333 EAST CANAL DRIVE
POST OFFICE BOX 949
TURLOCK, CALIFORNIA 95381
(209) 883-8300

Don Pedro Dam and
Powerhouse

13 April 1999

Ron Freitas, Director
Stanislaus County Dept. of Planning
1100 H St., 2nd Floor
Modesto, CA 95354

RE: Salmon Habitat Restoration Construction Projects

Dear Mr. Freitas,

The CALFED Bay-Delta Program has developed a Proposal Solicitation Package for funding Ecosystem Restoration Projects and Programs in 1999 and 2000. The Turlock and Modesto Irrigation Districts have been actively working on several fall-run salmon habitat restoration projects along the Tuolumne River since 1997. The TID is the program manager for these projects and coordinator for the Tuolumne River Technical Advisory Committee, TRTAC, which oversees the development of the projects.

This letter is a formal notice that on behalf of the TRTAC, the TID will be submitting two restoration proposals to CALFED for funding in 2000. The first is called Mining Reach No. 3, Warner-Deardorff Segment and is located between River Mile 36.5 and 35.1 below the Roberts Ferry Bridge. The second is called SRP 10, located at River Mile 25 below the Geer Road Bridge. Project work in 2000 would consist of engineering design, ROW acquisition, and permitting. We anticipate the actual construction would start in 2001 and end in 2002.

These two projects are a continuation of the work started in 1998 with the filing of a mitigated EA/IS for all six projects currently identified by the TRTAC. We are actively working on these projects with Bob Kachel of your staff. Currently CALFED and the US Fish & Wildlife Service Anadromous Fish Restoration Program have funded the first three projects. Construction on the first two projects is anticipated to start late this summer.

If you have any questions please call me at 2029-883-8316.

Sincerely,
TURLOCK IRRIGATION DISTRICT

Wilton B. Fryer
Wilton B. Fryer, P.E.

Water Planning Department Manager

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TURLOCK IRRIGATION DISTRICT

333 EAST CANAL DRIVE
POST OFFICE BOX 949
TURLOCK, CALIFORNIA 95381
(209) 883-8300

Don Pedro Dam and
Powerhouse

13 April 1999

Ray Simon, Chairman
Stanislaus County Board of Supervisors
1100 H St., 2nd Floor
Modesto, CA 95354

RE: Salmon Habitat Restoration Construction Projects

Dear Mr. Simon,

The CALFED Bay-Delta Program has developed a Proposal Solicitation Package for funding Ecosystem Restoration Projects and Programs in 1999 and 2000. The Turlock and Modesto Irrigation Districts have been actively working on several fall-run salmon habitat restoration projects along the Tuolumne River since 1997. The TID is the program manager for these projects and coordinator for the Tuolumne River Technical Advisory Committee, TRTAC, which oversees the development of the projects.

This letter is a formal notice that on behalf of the TRTAC, the TID will be submitting two restoration proposals to CALFED for funding in 2000. The first is called Mining Reach No. 3, Warner-Deardorff Segment and is located between River Mile 36.5 and 35.1 below the Roberts Ferry Bridge. The second is called SRP 10, located at River Mile 25 below the Geer Road Bridge. Project work in 2000 would consist of engineering design, ROW acquisition, and permitting. We anticipate the actual construction would start in 2001 and end in 2002.

These two projects are a continuation of the work started in 1998 with the filing of a mitigated EAMS for all six projects currently identified by the TRTAC. We are actively working on these projects with Ron Freitas and Bob Kachel of the Planning Department staff. Currently CALFED and the US Fish & Wildlife Service Anadromous Fish Restoration Program have funded the first three projects. Construction on the first two projects is anticipated to start late this summer.

If you have any questions please call me at 209-883-8316.

Sincerely,
TURLOCK IRRIGATION DISTRICT
Wilton B. Fryer
Wilton B. Fryer, P.E.
Water Planning Department Manager

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**GRAVEL MINING REACH &
SPECIAL RUN POOLS 9/10**

Dear Interested Parties:

Enclosed for your review and comment is the draft environmental assessment and initial study (EA/IS) for two restoration and mitigation projects ("proposed action") on the Tuolumne River in Stanislaus County, California. The upstream Gravel Mining Reach project extends along six miles of the river between Waterford and Roberts Ferry from River Mile (RM) 34.3 to 40.3; and the downstream Special Run Pools 9 and 10 project is within a one-mile reach immediately downstream of Fox Grove County Park from RM 25.2 to 25.9. The two projects are identified as priority actions in the Anadromous Fish Restoration Program Tuolumne River Riparian Zone Improvements, and the *Final Environmental Impact Statement (FEIS) for the Reservoir Release Requirements for Fish at the New Don Pedro Project, California*. This EA/IS is tiered from the FEIS, which is incorporated by reference into the document.

The proposed action would rehabilitate the channel and floodplain system and improve natural geomorphic functions to restore and maintain instream and floodplain habitats for the benefit of salmon and other native riparian species. Following implementation of the first phase, the success of the proposed action will be evaluated and, based on the results of evaluation, the remaining phases of the proposed action will be fine-tuned to improve success. In support of this adaptive management strategy, a monitoring plan (also enclosed) will be implemented to assess progress toward meeting the objectives of the proposed action, and to minimize environmental impacts described in the EA/IS. For the purposes of the analysis, three alternatives to the proposed action are identified, including the no-action alternative.

The public review period for this document will end 45 days after publication of a notice of availability in the *Modesto Bee*. Comments or requests for more information should be addressed to:

U.S. Fish and Wildlife Service
Sacramento Field Office
(Attn: John Brooks)
3310 El Camino Avenue, Suite 130
Sacramento, CA 95821-6340
(916) 979-2745

or

Turlock Irrigation District
Water Planning Department
(Attn: Wilton Fryer)
333 East Canal Drive - PO Box 949
Turlock, CA 95381-0949
(209) 883-8316

A public meeting of the Turlock Irrigation District Board of Directors will be held on Tuesday, June 23, 1998, at 10:30 a.m. at the Turlock Irrigation District, 333 East Canal Drive, Turlock. Comments on the EA/IS can also be presented at that meeting. Copies of the EA/IS can be reviewed at the locations listed above and at those listed at the end of this notice.

Sincerely,

TURLOCK IRRIGATION DISTRICT

U.S. FISH AND WILDLIFE SERVICE

Wilton B. Fryer, P.E.
Water Planning Department Manager

Wayne White, Field Supervisor
Sacramento Field Office

Enclosure

**Tlered Environmental Assessment and
Initial Study/Mitigated Negative Declaration**

**Anadromous Fish Restoration Program
Tuolumne River Riparian Zone Improvements**

**Gravel Mining Reach & Special Run Pools 9/10
Restoration and Mitigation Projects**



**Sacramento Field Office
United States Fish and Wildlife Service
Sacramento, California**



**Turlock Irrigation District
Turlock, California**

May 15, 1998

OWNER OPERATOR LIST

First	Last	Mail	City	State	Zip	Parcel	Project
Rowe	Barney	19400 Yosemite Rd.	Waterford	CA	95386	008-07-35	7-11 Reach
Don	Crooker	21166 Yosemite Rd.	Waterford	CA	95386	008-08-08	7-11 Reach
Wendell	Reed	PO Box 3191	Modesto	CA	95353	008-11-01	7-11 Reach
Lillian	Riley	1539 Sayre St.	San Leandro	CA	94579	008-07-16	7-11 Reach
Ken	Riley	14868 Saturn Dr	San Leandro	CA	94578	008-07-16	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	CA	95386	008-07-20	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	CA	95386	008-07-23	7-11 Reach
Tom	Sawyer	619 Roberts Ferry Rd.	Waterford	CA	95386	008-11-05	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	Ca	95386	008-12-02	7-11 Reach
Mark	van Overbee	860 Geer Court	Modesto	CA	95354	008-07-34	7-11 Reach
Betty	Wynne	19411 Lake Rd.	Hickman	CA	95323	008-11-02	7-11 Reach
Anthony	Donovan	1745 Mc Cormick St.	Turlock	CA	95380	018-04-12	SRP 9 & 10
Anthony	Donovan	1745 Mc Cormick St.	Turlock	CA	95380	018-04-13	SRP 9 & 10
State of Calif	Gen. Service	P.O. Box 2048	Stockton	CA	95201	018-03-06	SRP 9 & 10
Wil	Streeter	879 Geer Rd.	Modesto	CA	95354	018-03-17	SRP 9 & 10
Wil	Streeter	879 Geer Rd.	Modesto	CA	95354	018-03-20	SRP 9 & 10
Joe	Ruddy	P.O. Box 3042	Modesto	CA	95353	008-05-10	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-04	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-05	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-08	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95323	008-10-01	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-10-23	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-10-26	Ruddy Reach
State of Calif	Gen. Service	P.O. Box 2048	Stockton	CA	95201	008-10-32	Warner Reach
Ed	Garcia	1136 Charles Rd.	Hughson	CA	95326	018-03-19	SRP 10
Adeline	Solari	876 Charles Rd	Hughson	CA	95326	018-03-03	SRP 10
Douglas	Starn	6621 Blue Gum Rd.	Hughson	CA	95326	018-03-14	SRP 10
Charles	Claus	1012 Bristol Ln.	Modesto	CA	95360	008-09-14	Warner Reach
Walter	Deardorff	16825 Lampley Rd.	Waterford	CA	95323	008-09-15	Warner Reach
Roger	Warner	307 Denton Rd.	Hickman	CA	95323	008-10-22	Warner Reach
Bret	Warner	261 Denton Rd.	Hickman	CA	95323	008-10-34	Warner Reach
Kurt	Warner	471 Denton Rd.	Hickman	CA	95323	008-10-35	Warner Reach
Hollis	Warner	419 Denton Rd.	Hickman	CA	95323	008-10-37	Warner Reach
Roger	Warner	307 Denton Rd.	Hickman	CA	95323	008-10-38	Warner Reach
Charles	Golding	15930 Lampley Rd.	Hickman	CA	95324	080-14-05	Reed Reach
Lillian	Hampton	16231 Lampley Rd	Hickman	CA	95323	008-09-09	Reed Reach
Joyce	LaMunyon	500 Pauline Ave.	Modesto	CA	95358	080-14-03	Reed Reach
Linda	Larrick	15648 Yosemite Blvd.	Waterford	CA	95323	080-15-18	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	008-05-14	Reed Reach
Rose	Reed	P.O. Box 3191	Modesto	CA	95353	008-09-10	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	080-14-06	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	008-11-01	7-11 Reach
Carol	Vierra	P.O. Box 3191	Modesto	CA	95353	operator	7-11 Reach
Robert	Wooley	19701 Lake Rd.	Hickman	CA	95323	Wynne tenant	7-11 Reach
William	Brown	P.O. Box 3042	Modesto	CA	95352	operator	Ruddy Reach
Ron	Turcotte	P.O. Box 3042	Modesto	CA	95352	operator	Ruddy Reach
Don	Crooker	409 Greenwich Ct.	Modesto	CA	95350	008-12-01	source
Linda	Falasco	P.O. Box 1111	Los Banos	CA	93635	operator asso.	CMAC
Phil	Short	1376 Swanson Rd.	Hughson	CA	95326		TID Bd. Of Dir.

Tuolumne River Restoration

AGENCY LIST

Agencies

First	Last	Company	Mail	City	State	Zip	Phone
Ron	Milligan	Army Corp of Engineers	1325 "J" St. Room 1430	Sacramento	CA	95814	916-557-6726
Cindy	Darling	CALFED	1416 Ninth St., Suite 1155	Sacramento	CA	95814	916-657-2666
James	Pompy	Calif. Dept. of Conservation	801 "K" St., MS 12-30	Sacramento	CA	95814-3531	916-445-1825
William	Loudermilk	Calif. Dept. of Fish & Game	1234 E. Shaw Ave.	Fresno	CA	93710	209-222-3761
Steve	Ford	Calif. Dept. of Water Resources	3251 "S" Street	Sacramento	CA	95816	916-227-7534
Kevin	Faulkenbury	Calif. Dept. of Water Resources	3374 E. Shields Ave.	Fresno	CA	93726	209-445-5286
William	Jennings	Calif. Sport Fishing Protection Alliance	3536 Rainier Ave.	Stockton	CA	95204	209-464-5090
Dan	Steele	CALTRANS Environmental Program	1976 E. Charter Way	Stockton	CA	95201	
Ron	Yoshiyama	CCSF	Dept. of WFCB, U.C. Davis	Davis	CA	95616	916-752-0205
Linda	Falasco	CV Rock Sand Gravel Asso.	P.O. Box 1111	Los Banos	CA	93635	209-826-5955
Tom	Taylor	ENTRIX	590 Ygnacio Valley # 200	Walnut Creek	CA	94596	510-935-9920
Barbara	Ashworth	FEMA	3695 Bleckley St.	Mather	CA	95655	
John	Schnagl	FERC	888 First St. N.E.	Washington	D.C.	20426	202-219-2661
Dave & Allison	Boucher	Friends of the Tuolumne	2412 Hilo Lane	Ceres	CA	95307	209-537-7533
John	Farnkopf	Hilton, Farnkopf, & Hobson	2201 Walnut Ave. Suite 280	Fremont	CA	94538-2334	510-713-3273
Cort	Hiebert	J. Massey Atlantic Mutual					818-240-5530
Allen	Short	Modesto Irrigation District	P.O. box 4060	Modesto	CA	95352	209-526-7405
Chris	Mobley	National Marine Fishery Service	777 Sonoma Ave., Rm 325	Santa Rosa	CA	95404	
Michael	McElhiney	NRCS	711 County Center III, Suite B	Modesto	CA	95355	209-569-0497
Ranny	Eckstrom	Office of Emergency Services	2800 Meadowview Road	Sacramento	CA	95832	916-364-3359
Donn	Furman	Office of the City Attorney (CCSF)	1390 Market St. Suite 250	San Francisco	CA	94102	415-554-3961
Zede	Grader	PCFFA	P.O. Box 783	Mendocino	CA	95460	707-937-4145
Raymond	Barsch	Reclamation Board	1416 Ninth Street	Sacramento	CA	95814	916-653-5434
Greg	Vaughn	Regional Water Quality Control Bd.	3443 Routier Rd., Suite A	Sacramento	CA	95827-3098	
Art	Jensen	SFBAWUA	155 Bovet Road, Suite 410	San Mateo	CA	94402	650-349-3000
Tracey	Bettencourt	SJV Unified Air Pollution Control District	4130 Kiernnan Ave., Suite 130	Modesto	CA	95356	
Robert	Kachel	Stanislaus County Planning Dept.	1100 "H" Street	Modesto	CA	95354	209-525-6330
Diane	Jones	State Lands Commission	100 Howe Ave., Suite 100-South	Sacramento	CA	95825	916-574-1843
Tim	Ramirez	Tuolumne River Preservation Trust	Fort Mason Building C	San Francisco	CA	94123	415-292-3531
Phil	Short	Turlock Irrigation District	1376 Swanson Road	Hughson	CA	95326	209-883-4374
Paul	Elias	Turlock Irrigation District	P.O. Box 949	Turlock	CA	95881	209-883-8211
Gary	Taylor	U.S. Fish & Wildlife Service	3310 El Camino Ave., Suite 130	Sacramento	CA	95821	916-979-2117
John	Brooks	U.S. Fish & Wildlife Service	3310 El Camino Ave., Suite 130	Sacramento	CA	95821	916-979-2745

VIII. COSTS AND SCHEDULES

A. BUDGET COSTS

The total project cost is estimated to be \$4,593,000. The CALFED is being asked to fund 47% of the project of the SRP 10 project costs. The total amount requested from CALFED is \$2,179,000, consisting of \$1,785,000 for construction, \$54,000 for project management (3%), \$161,000 for construction management (9%), and a \$179,000 construction contingency (10%). There are three phases of construction, in-channel fill, floodplain reconstruction, and revegetation, for each side of the river. Approximately 293,000 cubic yards of fill will be needed for this project. The attached Table 3, Project Budget Summary, details the cost breakdown. The USFWS-AFRP will also be asked to fund 52% of the project costs, or \$2,384,000, including \$234,000 for revegetation and \$174,000 in project monitoring. The Districts will be contributing 1% or \$30,000 towards the monitoring and permitting costs. The project budget by funding source is shown in Table 4. The quarterly funding estimates are shown in Table 5.

TID has been coordinating with several different agencies to obtain funding for the SRP 9 and SRP 10 projects. TID, MID, and CCSF have provided \$100,000 through the TRTAC for CEQA, NEPA (EA/IS) documentation, and permitting for the 7/11 Segment and SRP 9 and funded \$117,500 for the overall Habitat Restoration Plan and public outreach program. The USFWS through AFRP is providing for pre-project monitoring, construction design, and portions of the Public Works construction separate from this CALFED request.

The costs of this restoration project compare favorably with estimates prepared by DWR and CDFG for 4 Pumps financing of five planned predator isolation and habitat restoration projects along 3.5 miles of the Merced River near Snelling.

B. SCHEDULE

The attached Gantt chart schedule, Figure 3, shows the basic components of SRP 9 and SRP 10 restoration and the relationship to similar activities in the Mining Reach. The schedule shows both SRP 9 and SRP 10 constructed as projects constructed over a 2 year period.

This PSP request is for the October 1999 funding cycle and is designed to assure that funds for construction are available prior to bidding for the construction work that starts in the summer of 2001. This will provide for a smooth continuum of construction that fits into the seasonal limits on instream restoration construction. Such funding assurances also provide an incentive for mobilized contractors to submit lower bids for future work.

TABLE 3 PROJECT BUDGET SUMMARY

TUOLUMNE RIVER SRP 10 REACH RESTORATION

SRP 10 SEGMENT Rm 25.6 to 25.1

Construction Task from Figure 9	Description of work		Cost	Funding Source
Phase 2A	South Bank Restore Channel		833,000	AFRP
Phase 2B	South Bank Restore Floodplain		358,000	AFRP
Phase 3A	North Bank Restore Channel		1,249,000	CALFED
Phase 3B	North Bank Restore Floodplain		536,000	CALFED
	sub total		2,976,000	
Phase 4	Revegetation		234,000	AFRP
All Phases	Monitoring 2001 to 2003		174,000	AFRP
All Phases	Conservation Easements		50,000	AFRP
All Phases	Design engineering	5%	161,000	AFRP
All Phases	ROW Engineering	3%	96,000	AFRP
All Phases	NEPA, CEQA, Permits		30,000	DISTRICTS
All Phases	Irrigation of Revegetation		90,000	AFRP
	sub total		835,000	
	Contingency	10%	379,000	
	Construction Management	9%	289,000	
	Project Management	3%	114,000	
	sub total		782,000	
	PROJECT TOTAL		4,593,000	

Comments:

The original SRP 9 & 10 proposal from McBain & Trush, Appendix 1, had overall in place aggregate costs of \$10.16 / CY for an estimated 293,000 CY. This has been prorated as 70% instream fill and 30% floodplain reconstruction with 60 % on the north side of the channel and 40% on the south side of the channel. The material costs have been increased 40 % to reflect current prices.

TABLE 4 PROJECT BUDGET SUMMARY by SOURCE

TUOLUMNE RIVER SRP 10 REACH RESTORATION

SRP 10 SEGMENT Rm 25.6 to 25.1

Construction Task from Figure 9	Description of work	Cost
CALFED Share		
	Construction	60% 1,785,000
	sub total	1,785,000
	Contingency	10% 179,000
	Construction Management	9% 161,000
	Project Management	3% 54,000
	CALFED Total	47% \$ 2,179,000
AFRP Share		
	Construction	40% 1,191,000
	Revegetation	100% 234,000
	Monitoring	100% 174,000
	Conservation Easements	100% 50,000
	Design engineering	100% 161,000
	ROW Engineering	100% 96,000
	Irrigation of Revegetation	100% 90,000
	sub total	1,996,000
	Contingency	10% 200,000
	Construction Management	9% 128,000
	Project Management	3% 60,000
	AFRP Total	52% \$ 2,384,000
DISTRICTS share		
	NEPA, CEQA, Permits	1% 30,000
	Project Total	\$ 4,593,000

TABLE 5

QUARTERLY PROJECT BUDGET ESTIMATES

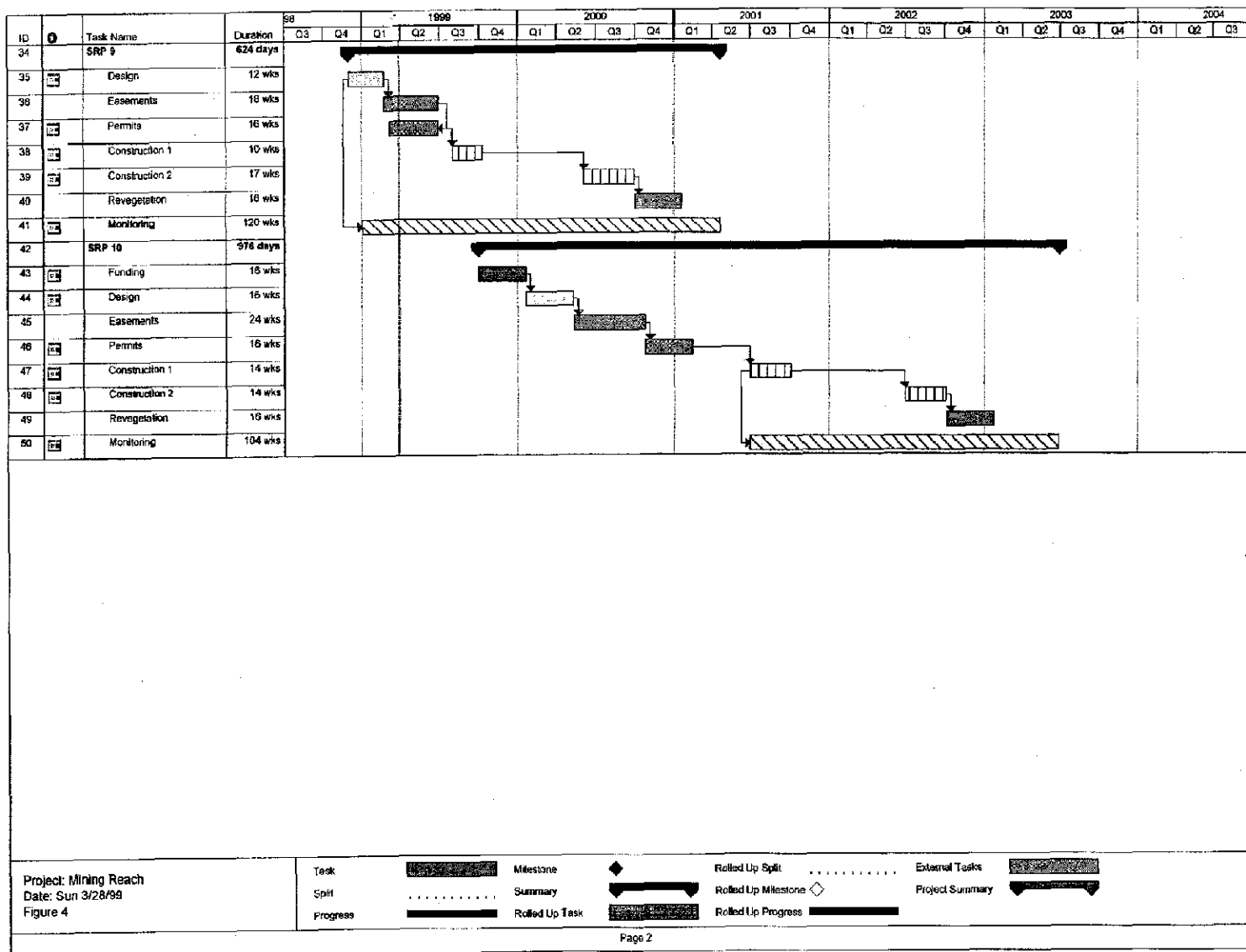
SRP 10 SEGMENT RM 25.6 to 25.1

SRP TO SEGMENT RM 20.0 to 20.1

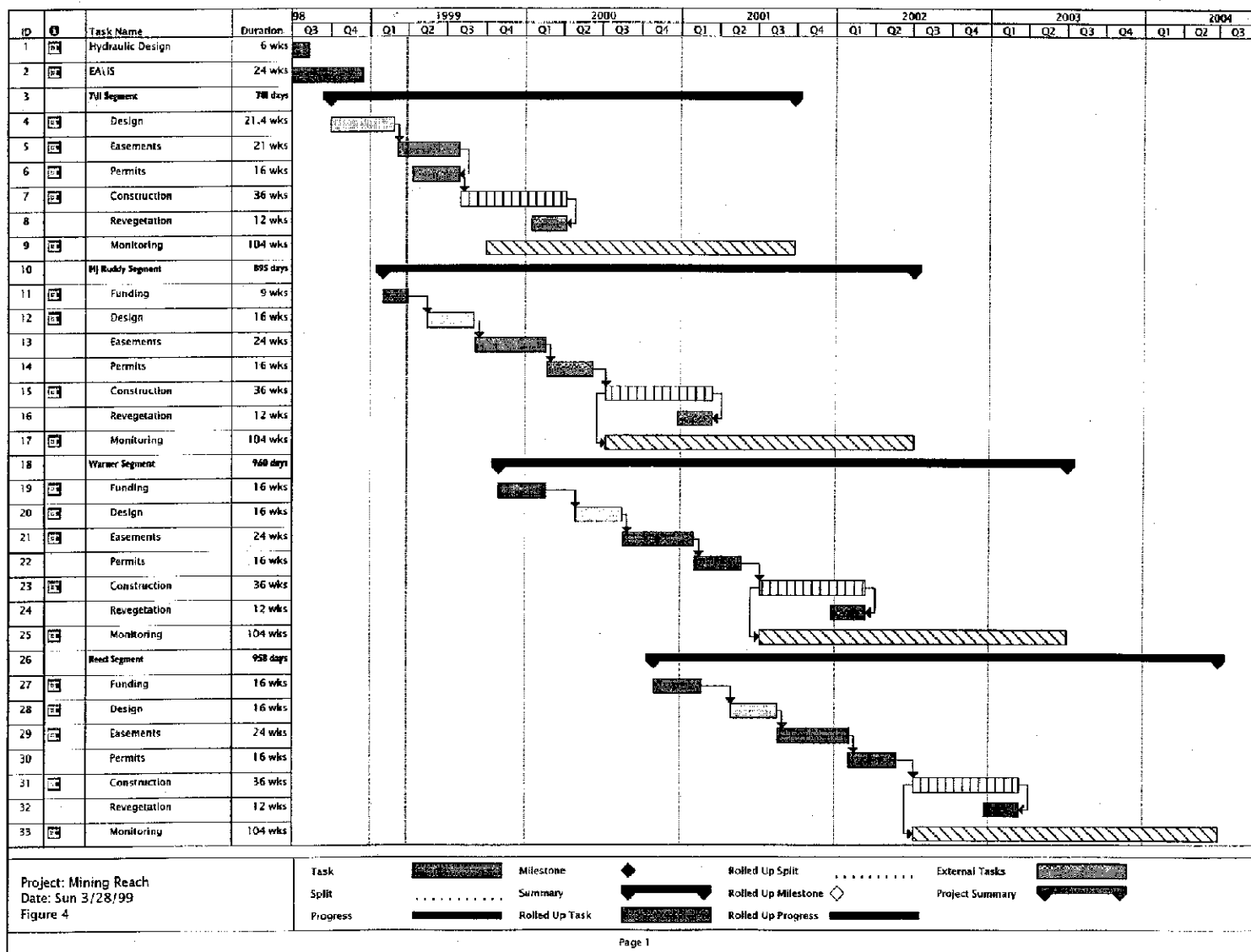
Rounded to nearest \$1,000															
Task	Description of Work	2000			2001				2002				2003	Budget Total	Funding Source
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
2A	South Bank Restore Channel					100	633	100							833 AFRP
2B	South Bank Restore Floodplain									50	200	108			358 AFRP
3A	North Bank Restore Channel					120	979	150							1,249 CALFED
3B	North Bank Restore Floodplain									50	300	186			536 CALFED
	subtotal					220	1,612	250		100	500	294			2,976
4	Revegetation							34				200			234 AFRP
	Monitoring 2001 to 2003						86				73		15		174 AFRP
	Conservation Easements				50										50 AFRP
	Design engineering	61	100												161 AFRP
	ROW Engineering		50	46											96 AFRP
	NEPA, CEQA, Permits			30											30 DISTRICTS
	Irrigation of Revegetation												90		90 AFRP
	subtotal	61	150	76	50		86	34			73	200	105		835
	Contingency 10%					12	98	15		5	30	19			179 CALFED
		6	15	5	5	10	72	13		5	27	31	11		200 AFRP
	Construction Management 9%					11	88	14		5	27	17			162 CALFED
						9	57	12		5	18	28			129 AFRP
	Project Management 3%					4	29	5		2	9	6			55 CALFED
		2	5	1	2	3	22	4		2	8	9	3		61 AFRP
	subtotal	8	20	6	7	49	366	63		24	119	110	14		785
	PROJECT TOTAL	69	170	82	57	269	2,064	347		124	692	604	119		4,596
	CALFED share					147	1,194	184		62	366	228			2,181
	AFRP share	69	170	52	57	122	784	163		62	253	376	104		2,211

Rounding to nearest \$1,000 in Contingency, CM, and PM results in higher totals than Table 4

I-013954



I-013954



TUOLUMNE RIVER SPECIAL RUN POOL 10 RESTORATION

IX. APPLICANT QUALIFICATIONS

Since 1971, TID, MID, and CCSF, in cooperation with DFG and USFWS, have monitored river conditions and developed programs that enhance the natural production of fall-run chinook salmon in the Tuolumne River. The project manager for these activities has been TID.

A. TRTAC and Other Local Support for Project

The firm of McBain & Trush was retained in 1996 by TID through the TRTAC to develop an integrated, long-term fish and riparian habitat restoration plan for the Tuolumne River below La Grange Dam using fluvial geomorphology principles. They were to prepare preliminary designs for specific restoration projects, which had been approved by the TRTAC participants as high priority projects. The SRP 9 & 10 had long been identified as a portion of the river that had been substantially altered by past mining operations that would benefit from restoration of more natural geomorphic processes.

B. Project Management

The Project Manager is Wilton Fryer, P.E. Mr. Fryer graduated from the University of California at Davis with a BS in Soil & Water Science, an MS in Irrigation Science, and later an ME in Civil Engineering with an emphasis in water resources. He is currently registered as both a Civil Engineer and an Agricultural Engineer. Accomplishments are: Development and implementation of the Oakdale Irrigation District Irrigation Master Plan; Directed a \$22 million canal rehabilitation project for OID where 54 miles of dirt canals were replaced with pipe; Development of the OID domestic water service system; Designer and project manager for a replacement water treatment plant for the TID La Grange Domestic Water System.

Tim Ford has been the staff aquatic biologist for TID and MID since 1981. Mr. Ford graduated from the University of California at Davis with a BS in Wildlife & Fisheries Biology in 1977. He worked as a Biological Technician for the Modoc, Tahoe, and Stanislaus National Forests prior to working for the Districts. Mr. Ford is tasked with planning, coordinating and conducting the aquatic resources program for the Districts, and his responsibilities at TID include field studies, program development, consultant supervision, and coordination with Don Pedro project operations.

TID staff will provide contracting support and financial service support as needed. TID Engineering Administration will assist with providing construction management and inspection services to the project. Consultants retained during the first phase of the Mining Reach and SRP 9 projects continue to be retained for subsequent phases of the projects to insure continuity in the design and analysis. The engineering firm of HDR, Inc. has been retained to prepare detailed construction plans and specifications, and oversee construction management. The firm of HART, Inc., will provide revegetation design and native plant materials. The firm of EDAAW

Inc. has been retained to perform the CEQA and NEPA environmental work and to obtain necessary permits.

Consultants

The firm of McBain & Trush has performed project concept design work, and will continue to provide oversight of the civil construction design work, revegetation design and implementation, and fluvial process monitoring. McBain & Trush is a professional consulting partnership specializing in applying fluvial geomorphic and ecological research to river management and restoration, particularly in regulated river ecosystems. The principals on this project are Scott McBain, Dr. William Trush, and John Bair. Scott McBain is a hydraulic engineer and fluvial geomorphologist with an MS in Civil Engineering from the University of California at Berkeley. He specializes in effects of high stream flows on channel morphology, bedload transport, watershed sediment yields, and stream restoration. Dr. William Trush is an adjunct professor in the California State University Humboldt, Fisheries Department, specializing in anadromous fish ecology, anadromous fish interactions with fluvial geomorphology, channel maintenance flows and hydrology, riparian ecology, and stream restoration and management. He is also Director of the CSUH Institute for River Ecosystems. John Bair is a riparian botanist with an MS in Environmental Systems from Humboldt State University. He specializes in riparian interactions with geomorphic processes and riparian restoration.

The firm of Stillwater Sciences has been retained to assist with the design and implementation of the fishery monitoring plan components. Stillwater Sciences is actively involved with the river wide monitoring associated with the Districts' FERC Settlement Agreement.

TUOLUMNE RIVER SPECIAL RUN POOL 10 RESTORATION

X. COMPLIANCE WITH STANDARD TERMS & CONDITIONS

Applicant is a public entity. The applicable PSP project group type is Public Works Construction.

The applicant agrees to the terms and conditions of the Proposal Solicitation Package dated February 1999 and as amended by CALFED's Responses to PSP Questions dated 16 March 1999 and applicant intends to comply with those terms and conditions.

It is anticipated that private contractors will perform a majority of the public works construction effort. The applicant will be deferring the requirement for submission of bid & payment bonds until such time as each subcontract is sought and awarded and before any work under the subcontract is performed.

Enclosed are the following completed forms:

Non-collusion Affidavit

Submitted by:

TURLOCK IRRIGATION DISTRICT

By Paul Elias By R.D. B. th
Paul D. Elias, General Manager

Date: 13 April 1998

ferc\restplan\SRP10CalFedRFP.doc

APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: Application <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED 13 Apr 99 Applicant Identifier 3. DATE RECEIVED BY STATE State Application Identifier 4. DATE RECEIVED BY FEDERAL AGENCY Federal Identifier	
5. APPLICANT INFORMATION Legal Name: <u>Turlock Irrigation District</u> Address (give city, county, State, and zip code): PO Box 949 Turlock, CA 95381 Organizational Unit: <u>Water Planning Dept.</u> Name and telephone number of person to be contacted on matters involving this application (give area code): Wilton Fryer 209-883-8316			
6. EMPLOYER IDENTIFICATION NUMBER (EIN): [] [] - [] [] [] [] [] []		7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="display: flex; justify-content: space-between;"> <div> A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District </div> <div> H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____ </div> </div> <div style="text-align: right; border: 1px solid black; width: 30px; height: 20px; line-height: 20px; margin: 0 auto;">G</div>	
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): [] [] A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____		9. NAME OF FEDERAL AGENCY: USBR - CALFED	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: [] [] - [] [] [] [] TITLE: _____		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Restor .5 mile of fall-run chinook salmon habitat by eliminating predator (beaver) habitat and replacing it with a riparian flood way. 2nd of 2 predator isolation projects on Tuolumne River.	
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): Stanislaus County California		13. PROPOSED PROJECT Start Date: <u>Mar 2000</u> Ending Date: <u>Mar 2002</u>	
14. CONGRESSIONAL DISTRICTS OF: 18 Gary Condit		15. ESTIMATED FUNDING:	
a. Federal USFWS-AFEP \$ 2,384,000 .00		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS? a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
b. Applicant \$.00			
c. State CALFED \$ 2,179,000 .00			
d. Local Districts \$ 30,000 .00			
e. Other \$.00			
f. Program Income \$.00			
g. TOTAL \$ 4,593,000 .00		17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Type Name of Authorized Representative <u>Wilton B. Fryer P.E.</u>		b. Title <u>Water Planning Dept. Mgr.</u>	
c. Telephone Number <u>209-883-8316</u>		d. Signature of Authorized Representative <u>Wilton B. Fryer</u>	
e. Date Signed <u>13 Apr 99</u>		Previous Edition Usable Authorized for Local Reproduction	

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Prescribed by OMB Circular A-102

BUDGET INFORMATION – Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	\$ 54,000 -	\$	\$
2. Land, structures, rights-of-way, appraisals, etc.	\$	\$	\$
3. Relocation expenses and payments	\$	\$	\$
4. Architectural and engineering fees	\$	\$	\$
5. Other architectural and engineering fees	\$	\$	\$
6. Project inspection fees	\$ 161,000	\$	\$
7. Site work	\$	\$	\$
8. Demolition and removal	\$	\$	\$
9. Construction	\$ 1,785,000 -	\$	\$
10. Equipment	\$	\$	\$
11. Miscellaneous	\$	\$	\$
12. SUBTOTAL	\$ 2,000,000 -	\$	\$
13. Contingencies	\$ 179,000 -	\$	\$
14. SUBTOTAL	\$ 2,179,000 -	\$	\$
15. Project (program) income	\$ 0 -	\$	\$
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 2,179,000 -	\$	\$
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.			Enter eligible costs from line 16c Multiply X 100 % \$ 2,179,000 -

ASSURANCES -- CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. Secs. 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. Secs. 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. Secs. 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Secs. 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. Secs. 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) Secs. 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. Secs. 3601 et seq.), as amended, relating to non-discrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made, and (j) the requirements of any other non-discrimination Statute(s) which may apply to the application.

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11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. Secs. 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. Secs. 276a to 276a - 7), the Copeland Act (40 U.S.C. Secs. 276c and 18 U.S.C. Sec. 874), the Contract Work Hours and Safety Standards Act (40 U.S.C. Secs. 327-333), regarding labor standards for federally assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the

National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. Secs. 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. Secs. 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).

16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. Secs. 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. Sec. 470), EO 11593 (identification and preservation of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
19. Will comply with all applicable requirements of all other Federal laws, Executive Orders, regulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL		TITLE	
<i>William B. Oyer</i>		<i>Water Planning Dept. Mgr</i>	
APPLICANT ORGANIZATION		DATE SUBMITTED	
<i>Turlock Irrigation District</i>		<i>13 Apr 99</i>	

SF 424D (Rev. 4/92) Back

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

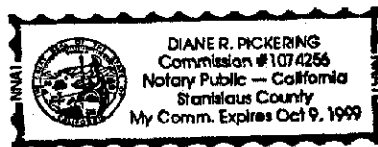
STATE OF CALIFORNIA)
)
COUNTY OF Stanislaus) ss

Wilton B. Fryer , being first duly sworn, deposes and
(name)
says that he or she is Water Planning Dept. Manager of
(position title)
Turlock Irrigation District
(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: 14 Apr 99

By Wilton B Fryer
(person signing for bidder)



(Notarial Seal)

Subscribed and sworn to before me on

4/14/99

Diane R. Pickering
(Notary Public)